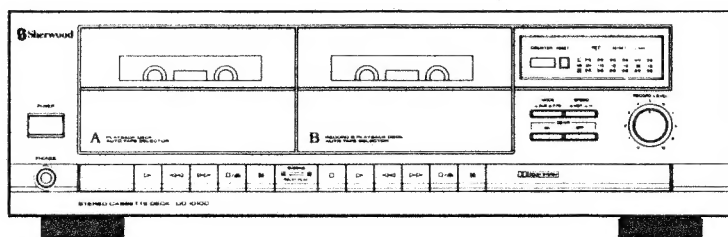
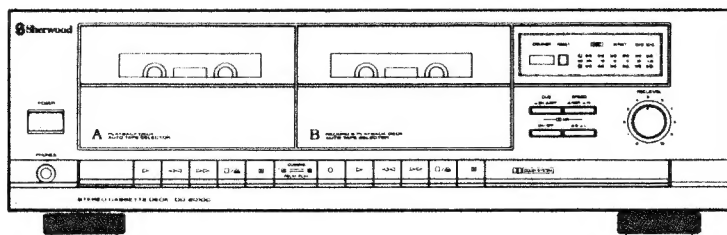


SERVICE MANUAL

DD-1010C STEREO DOUBLE CASSETTE DECK



DD-2010C STEREO DOUBLE CASSETTE DECK



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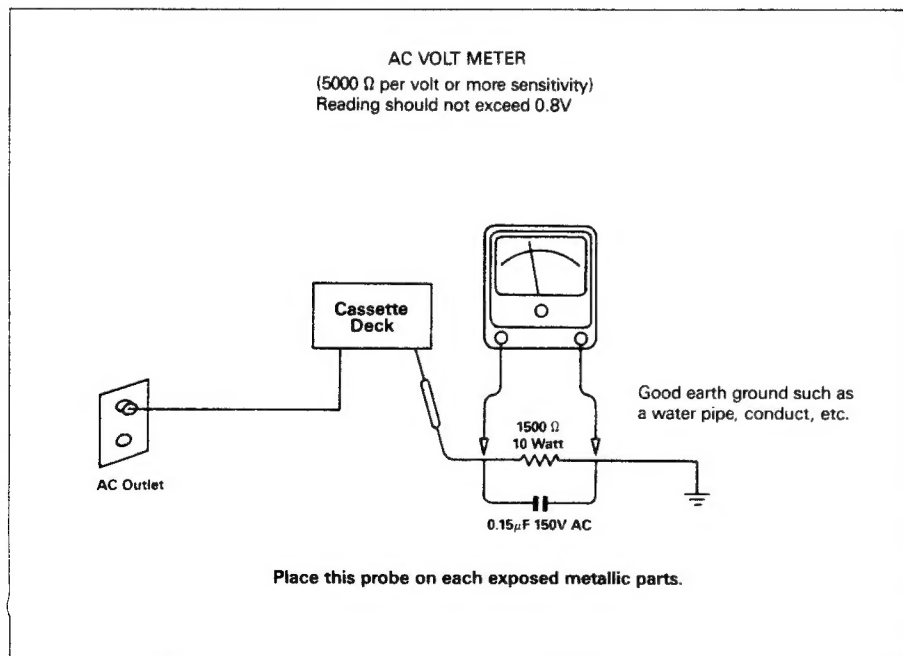
Safety Precaution

WARNING

Service should not be attempted by anyone unfamiliar with the necessary precautions on this player. The following precautions are necessary during servicing.

1. Many electrical and mechanical parts in this player have special characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements: electrical components having such features are identified by a Δ in the schematic diagram and the parts list.
Before replacing any of these components, read the parts list in this manual carefully.
The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.
2. Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as

terminals, screwheads, metal overlays, etc. to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 120V AC outlet (120V Version only). (Do not use a line isolation transformer during this check.) Use an AC voltmeter having 5000 Ω per volt or more sensitivity in the following manner:
Connect a 1500 Ω 10 watt resistor paralleled by a 0.15 μ F, 150V AC capacitor, between a known good earth ground (water pipe, conduct, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 Ω resistor and 0.15 μ F capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.3 volts RMS. This corresponds to 0.2mA AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



Specifications (DD-1010C only)

Type	Soft touch front loading stereo double cassette deck with Dolby NR system.
Track system	4 track, 2 channel stereo playback (Deck A) and Recording/Playback (Deck B)
Recording system	AC bias system (bias frequency: 105 kHz)
Erasing system	AC system
Tape speed	1-7/8 ips (4.76cm/sec.)
Heads	Hard permalloy recording/playback head \times 1 Hard permalloy playback head \times 1 Double gap erasing head \times 1
Motor	Electronic governor controlled DC motor
Wow and flutter	Less than 0.15% (VRMS), 0.30% (DIN)
Fast winding time	Approximately 120 seconds with C-60 cassette tape
Frequency Response	Normal tape 30-16,000Hz, \pm 5 dB
-20 dB REC	CrO ₂ tape 35-16,000Hz, \pm 5 dB
0 dB Rec/PB	Metal tape 35-16,000Hz, \pm 5 dB
Signal to noise ratio	Dolby NR 62 dB (Normal tape)
(Rec/PB)	(Weighted) 64 dB (CrO ₂ tape)
	64 dB (Metal tape)
	Dolby NR OFF 53 dB (Normal tape)
	(Weighted) 55 dB (CrO ₂ tape)
	55 dB (Metal tape)
3rd harmonic distortion	Less than 1.3% at 1kHz, 0 dB REC/PB
Input sensitivity/Impedance	Line 70mV/47k ohms
Output level/Impedance	Line 500mV/2.7k ohms
Built-in features	Dolby NR system. Relay playback, Synchronous dubbing High speed dubbing selector LED peak level display (5 LED \times 2) Auto tape selector Remote control operations (Pause)
Power consumption	13 Watts
Power requirements;	
A: 120V 50Hz for USA/Canadian version	
B: 120V/220V 60Hz/50Hz for multi-voltage version (switchable)	
C: 220V 50Hz for general European version	
D: 220V 50Hz for Germanian & Italian version	
E: 240V 50Hz for British & Australian version	
F: 220V 50Hz for Swiss & Scandinavian version	
Dimensions	440(W) \times 142(H) \times 245(D) mm, 17.3(W) \times 5.6(H) \times 9.6(D) inches
Weight(net)	4.7kg (10 lbs, 5.4 oz)

Note:

- * Specifications and the design subject to change without notice for improvements.
- * Recommended design reference tape (TDK) AD-C60(normal), SA-C60 (CrO₂), MA-C60 (metal) Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the European standard, and provides information on regional circuit modification through use of alternate schematic or wiring diagrams and information on regional component variations through use of parts list.
- * Dolby Noise Reduction manufactured under licence from Dolby Laboratories Licensing Corporation.

Specifications (DD-2010C only)

Type	Soft touch front loading stereo double cassette deck with Dolby B-C NR system.
Track system	4 track, 2 channel stereo playback (Deck A) and recording/playback (Deck B)
Recording system	AC bias system (bias frequency: 105kHz)
Erasing system	AC system
Tape speed	1-7/8 ips (4.76cm/sec.)
Heads	Hard permalloy recording/playback head ×1 Hard permalloy playback head ×1 Double gap erasing head ×1
Motor	Electronic governor controlled DC motor
Wow and flutter	Less than 0.15% (WRMS), 0.30% (DIN)
Fast winding time	Approximately 120 seconds with C-60 cassette tape
Frequency Response	Normal tape 30-16,000Hz, ± 5 dB
-20 dB REC	CrO ₂ tape 30-16,000Hz, ± 5 dB
Metal tape	30-16,000Hz, ± 5 dB
0 dB REC/PB	Dolby C NR 69 dB (Normal tape)
Signal to noise ratio	(Weighted) 71 dB (CrO ₂ tape)
(REC/PB)	71 dB (Metal tape)
	Dolby B NR 62 dB (Normal tape)
	(Weighted) 64 dB (CrO ₂ tape)
	64 dB (Metal tape)
	Dolby NR OFF 53 dB (Normal tape)
	(Weighted) 55 dB (CrO ₂ tape)
	55 dB (Metal tape)
3rd harmonic distortion	Less than 1.3% at 1kHz, 0 dB REC/PB
Input sensitivity/Impedance	Line 70mV/47k ohms
Output level/Impedance	Line 500mV/2.7k ohms
Built-in features	Dolby B-C NR system Relay playback, Synchronous dubbing High speed dubbing selector LED peak level display (5 LED × 2) Auto tape selector Remote control operations (Pause)
Power consumption	13 Watts
Power requirements;	
A: 120V 50Hz for USA/Canadian version	
B: 120V/220V 60Hz/50Hz for multi-voltage version (switchable)	
C: 220V 50Hz for general European version	
D: 220V 50Hz for Germanian & Italian version	
E: 240V 50Hz for British & Australian version	
F: 220V 50Hz for Swiss & Scandinavian version	
Dimensions	440(W) × 142(H) × 245(D) mm, 17.3(W) × 5.6(H) × 9.6(D) inches
Weight(net)	4.7kg (10 lbs, 5.4 oz)

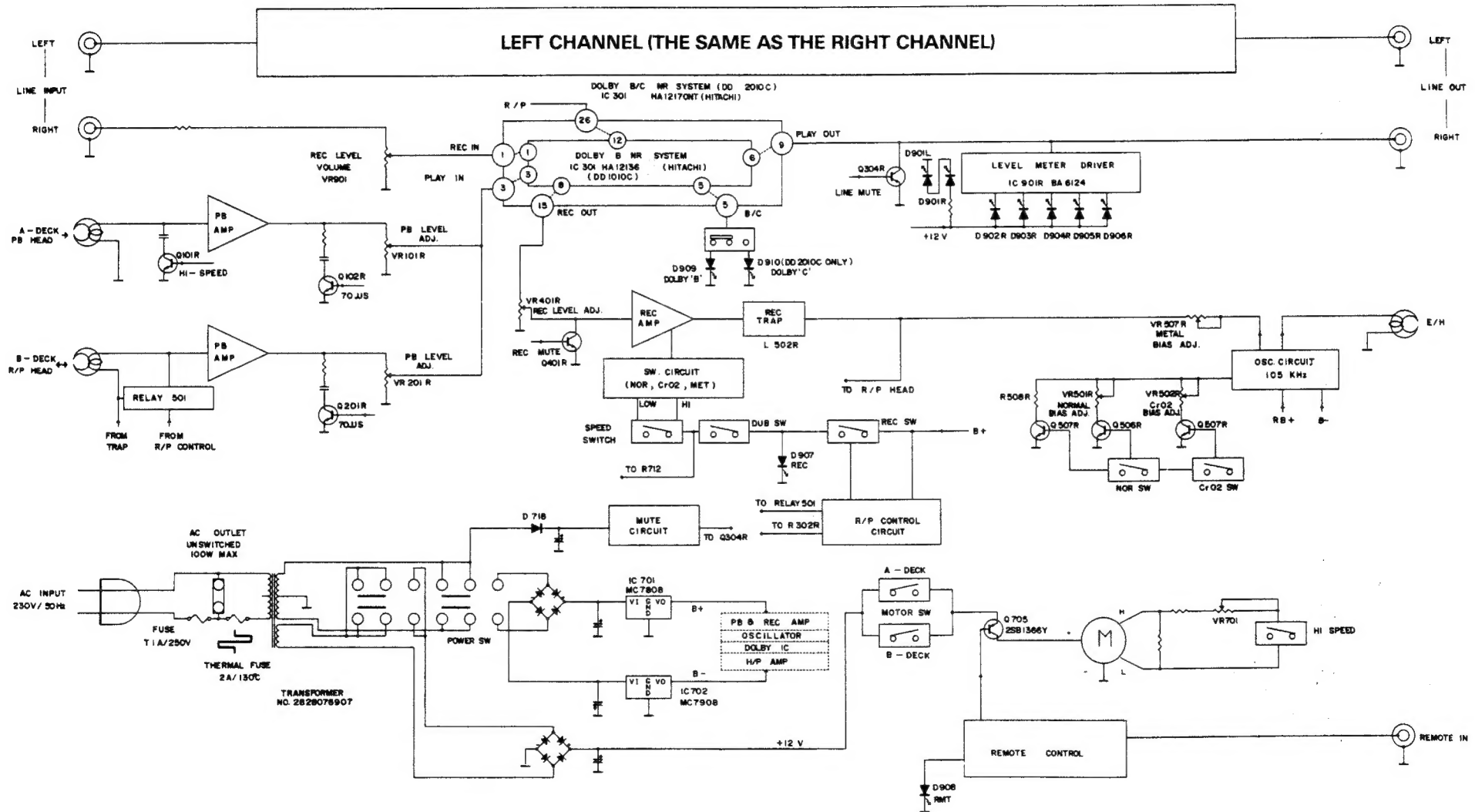
Note:

* Specifications and the design subject to change without notice for improvements.

* Recommended design reference tape (TDK) AD-C60 (normal), SA-C60 (CrO₂), MA-C60 (metal) Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the European standard, and provides information on regional circuit modification through use of alternate schematic or wiring diagrams and information on regional component variations through use of parts list.

*Dolby Noise Reduction manufactured under licence from Dolby Laboratories Licensing Corporation.

Block Diagram



Alignment Procedures

1. Before Measurements and Adjustment

The following general conditions apply to the electrical measurements and adjustments unless especially stated otherwise.

- Dolby NR switch off.
- Volume control: Recording level VR901 max.
- Use 500mV (200nwb/m) for 0 dB as the standard level of the unit.
- Test tape
 - TCC-154 _____ Azimuth(12.5kHz, -20dB)
 - TCC-122 _____ Tape speed(3kHz, -10dB)
 - TCC-130 _____ Playback level (Dolby NR ref. tape 400Hz, 0dB)
 - TCC-184 _____ Playback frequency response
- Reference Tape
 - Normal _____ TDK AD-60
 - CrO₂ _____ TDK SA-60
 - Metal _____ TDK MA-X60

2. Instrument required

- Audio frequency oscillator
- ACVM or dual channel, mV-meter
- Wow/Flutter meter
- Oscilloscope

Playback section

Adjustment	Test tape	Mode	Apply signal to	Measure on	Read on	Adjust with	Adjust to
Head Azimuth	TCC-154 12.5kHz (A.BEX)	Play (A & B Deck)		Line out	ACmV-meter Oscilloscope	Head adjusting screw	Max. ^{*a} • Lissajous' figure become a straight line with an angle 45 degrees
Playback Speed at normal	TCC-112 3kHz -10dB (A.BEX)	Play (A & B Deck)			Wow and Flutter Meter	B Deck VR701	^{*b} 3000Hz ± 30Hz
Playback Level	TCC-130 400Hz 0dB (A.BEX)				ACmV-meter	A Deck VR101L/R B Deck VR201L/R	500mV
Playback frequency response	TCC-184B 12.5kHz, 1kHz, 60Hz (A.BEX)				ACmV-meter		See graph Fig. 2 freq. response

Recording section

Adjustments	Test tape	Mode	Apply signal to	Measure on	Read on	Adjust with	Adjust to
Bias OSC Frequency	MA-X60 (TDK)	Rec/Pause		White color lead wire of CNT501	Frequency Counter	L501	105kHz ± 400Hz
105kHz trap suppression	MA-X60 (TDK)			TP403L/R	ACmV-meter Oscilloscope	L502L/R	Minimize the reading on ACVM
Target value Bias	Metal MA-X60			TP201L/R		VR503L/R	9mV
	CrO ₂					VR502	5.5mV
	Normal					VR501	3.4mV

Adjustment	Test tape	Mode	Apply signal to	Measure on	Read on	Adjust with	Adjust to
Recording Level	AD-60 (TDK)		400Hz to Line in	Line out	ACmV-meter	LF Generator	50mV
				TP402L/R		VR401L/R	About 15mV
Bias	MA-X60 SA-60 AD-60 (TDK)		400Hz to Line in	Line out		See Target Value Bias	^{*C} If it necessary repeat bias adjustment
			4kHz-6.3kHz 10kHz-12kHz 14kHz-16kHz to Line in		Recording number of Frequency with the same input voltage and play them back.		
Level Meter	Arbitrary Tape		400Hz to Line in	Dolby level Point	ACmV-meter Oscilloscope	VR901	
19kHz suppression				Line out	ACmV-meter	LF Generator	500mV
		Rec/Pause With Dolby NR on	19kHz to Line in		ACmV-meter Oscilloscope	L301L/R	Minimize the reading on ACVM

Note:

- ^{*a}. Prior to any measurement or adjustment with the tape running, heads and tape guides should be degaussed and cleaned. Reference below the figure.
- ^{*b}. The maximum permissible speed variation ± 0.5%. Moreover the Wow and Flutter can be read. This value should not be exceed 0.2%.
- ^{*c}. When the channel is adjusted, this may slightly affect the adjustment of the other channel. If the adjustment is correct, the frequency response curve will be similar to curve b in figure 1, distortion below 3%.

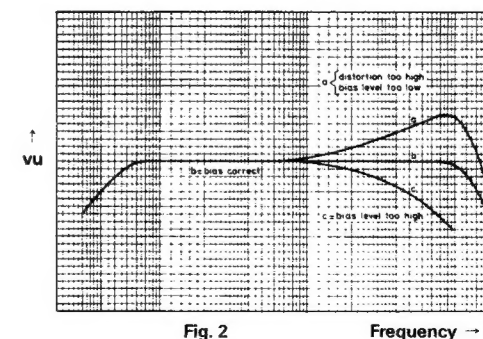
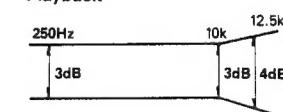


Fig. 2

Playback



Recording

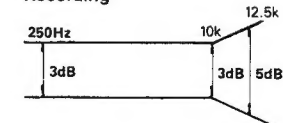
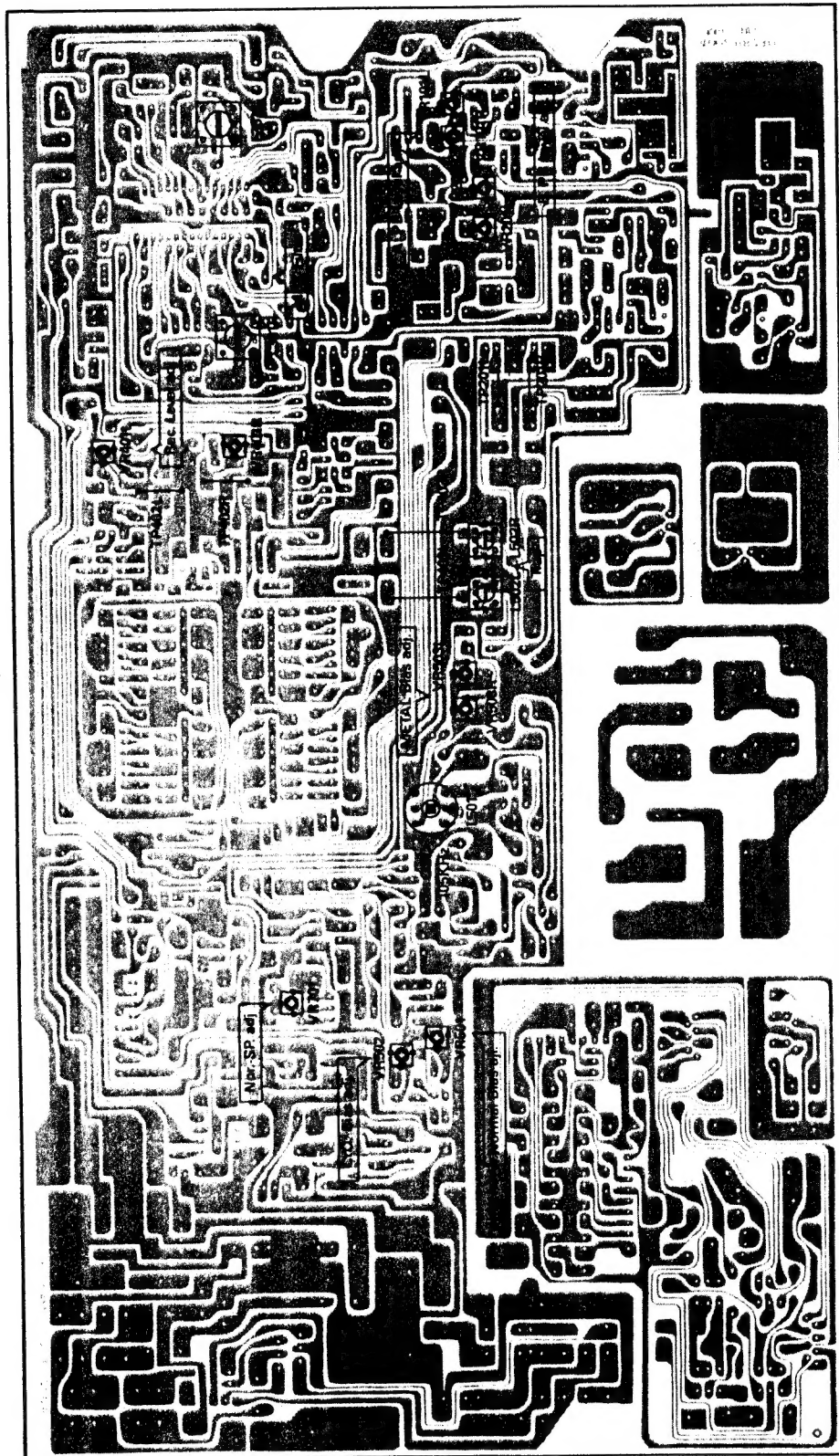


Fig. 1 Allowable Playback/Recording Frequency Response Zone

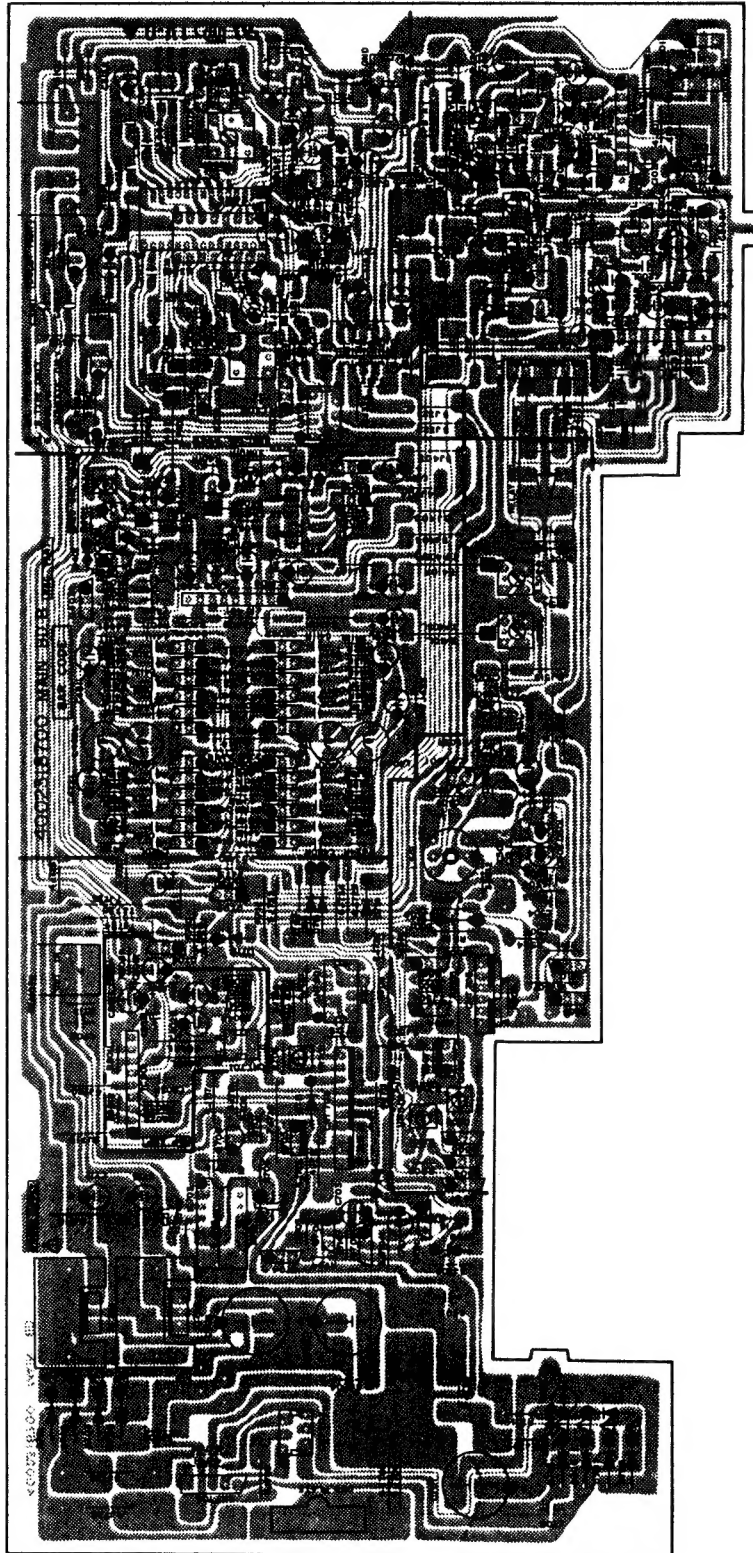
Alignment Point



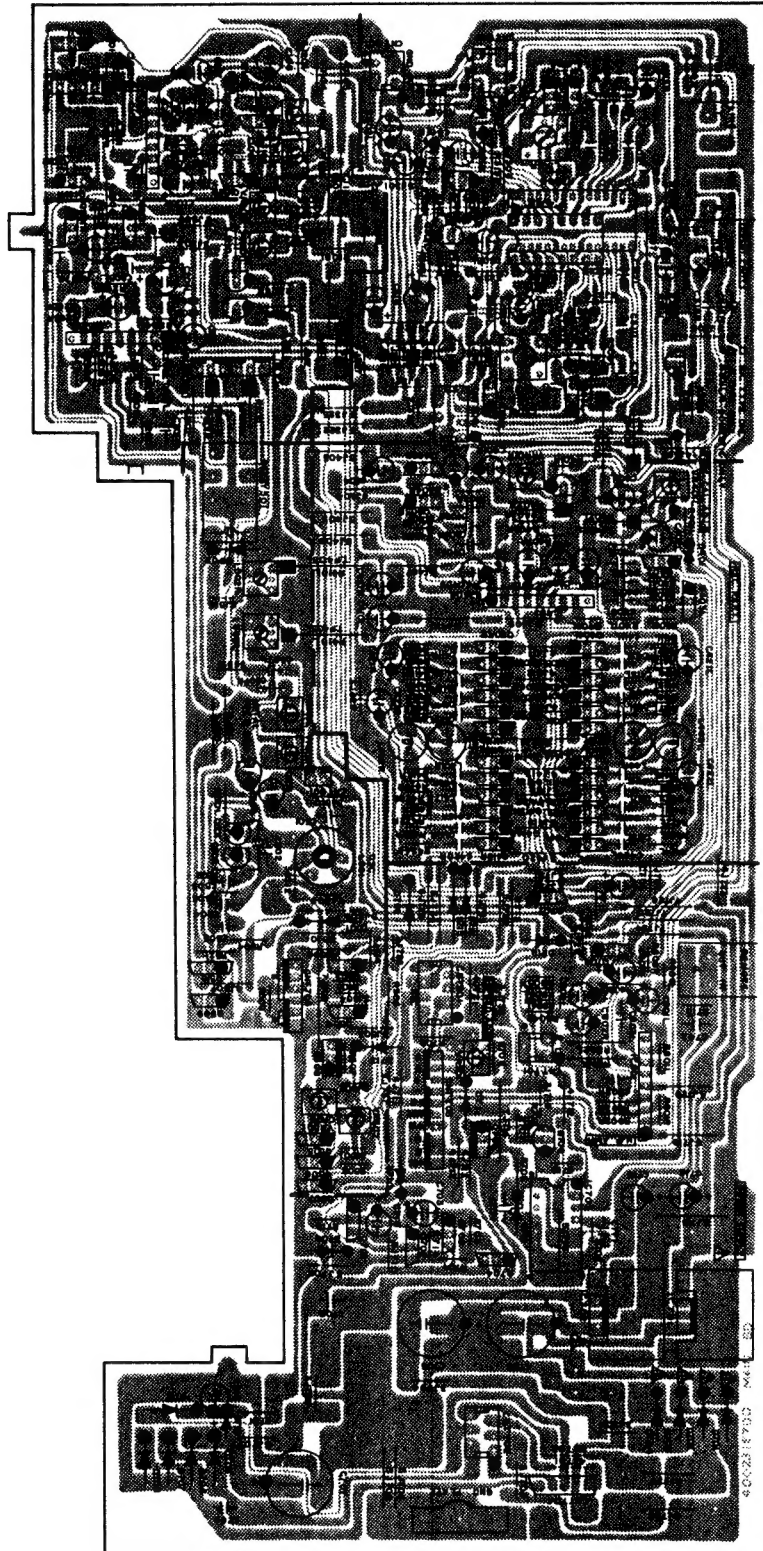
P.C. Boards (Top & Bottom Views)

MAIN P.C. BOARD 4002318700

(TOP VIEW)

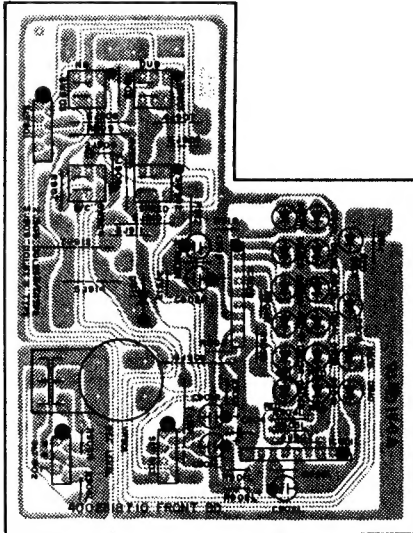


(BOTTOM VIEW)

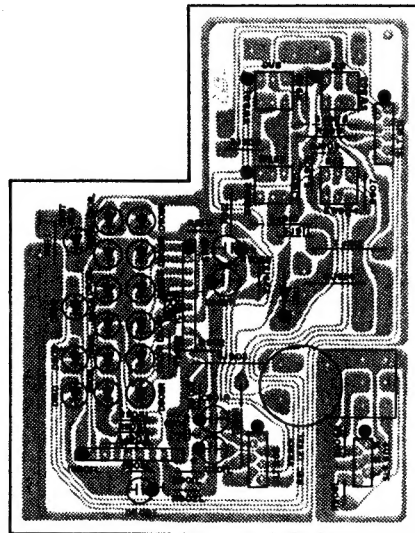


FRONT P.C. BOARD 4002318710

(TOP VIEW)

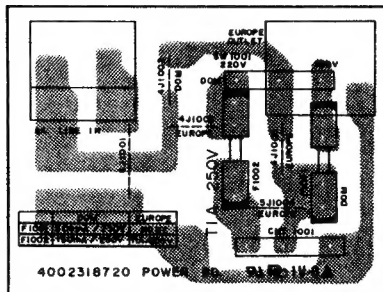


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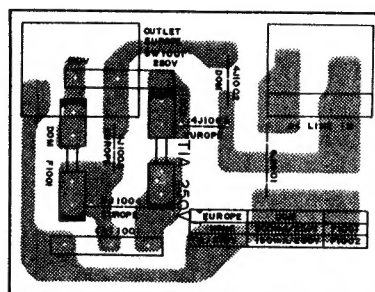


POWER P.C. BOARD 4002318720

(TOP VIEW)

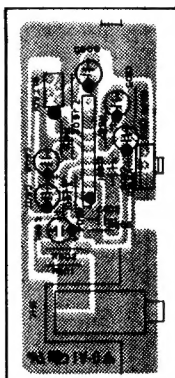


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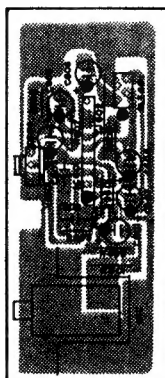


MIC P.C. BOARD 4002318730

(TOP VIEW)

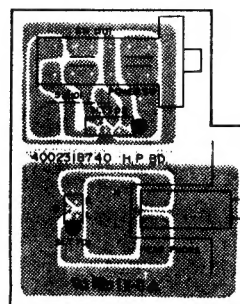


(BOTTOM VIEW)

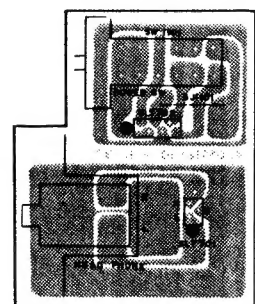


HP P.C. BOARD 4002318740

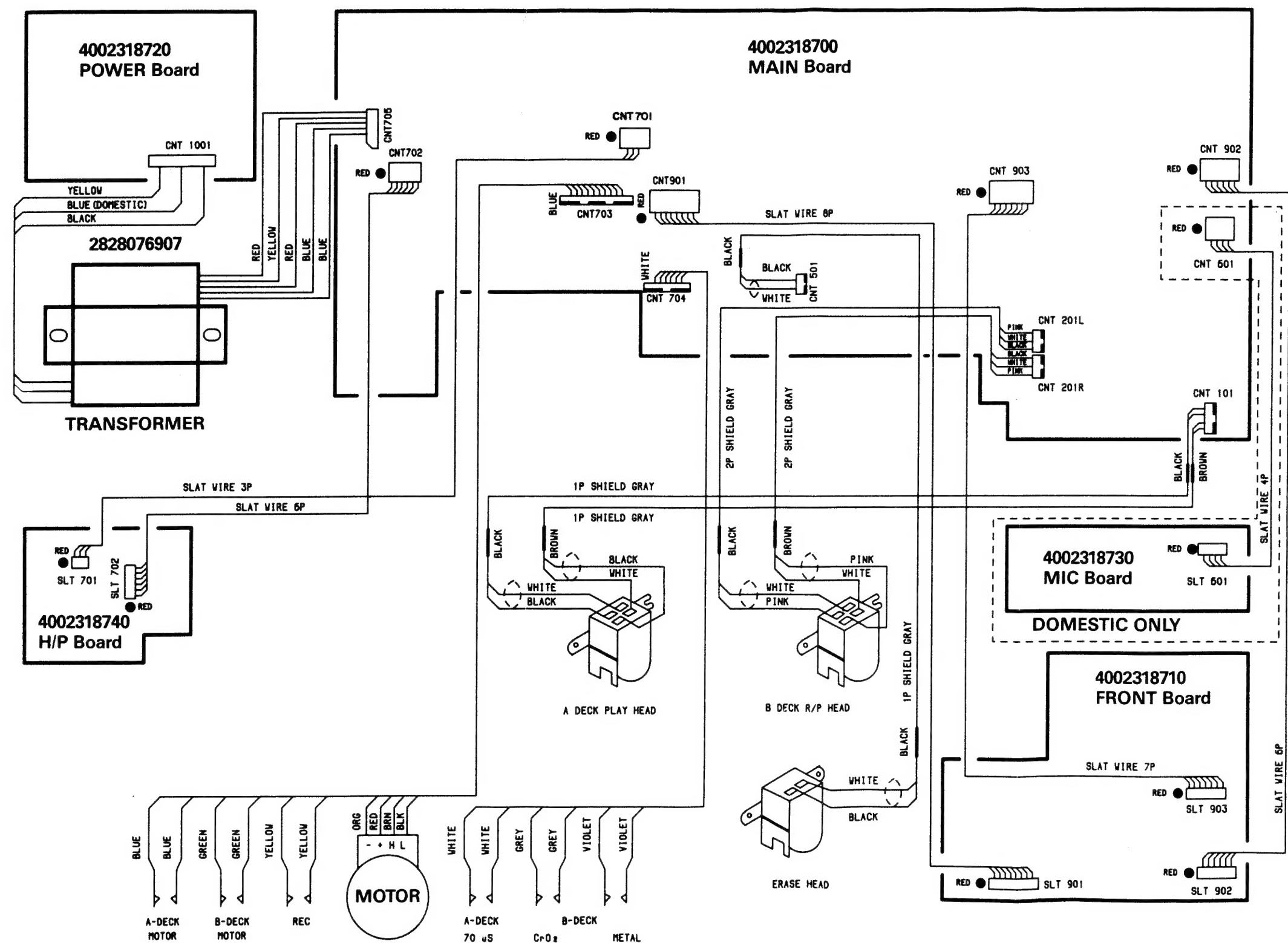
(TOP VIEW)



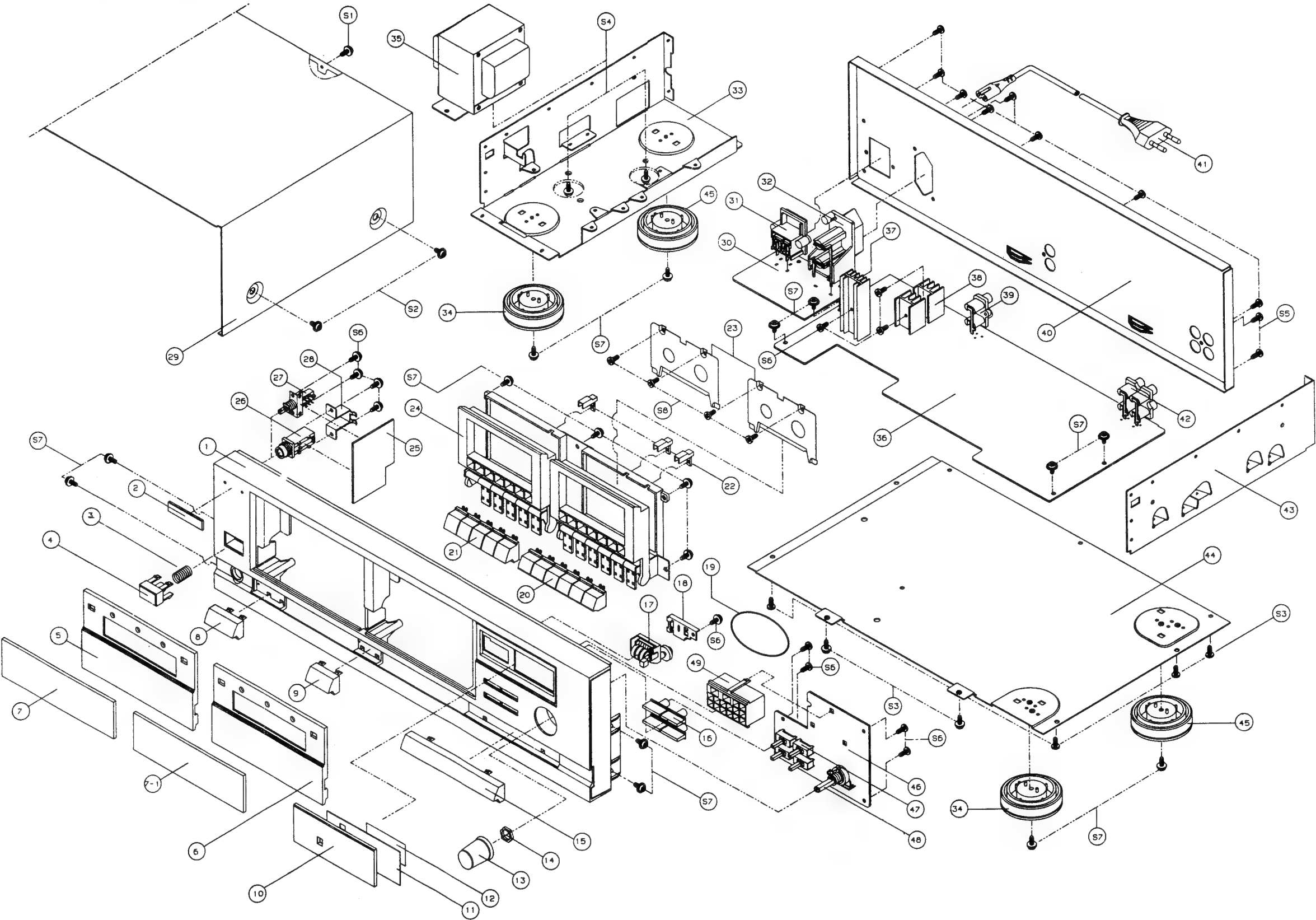
(BOTTOM VIEW)



Wiring Diagram



Exploded View (Cabinet & Chassis)

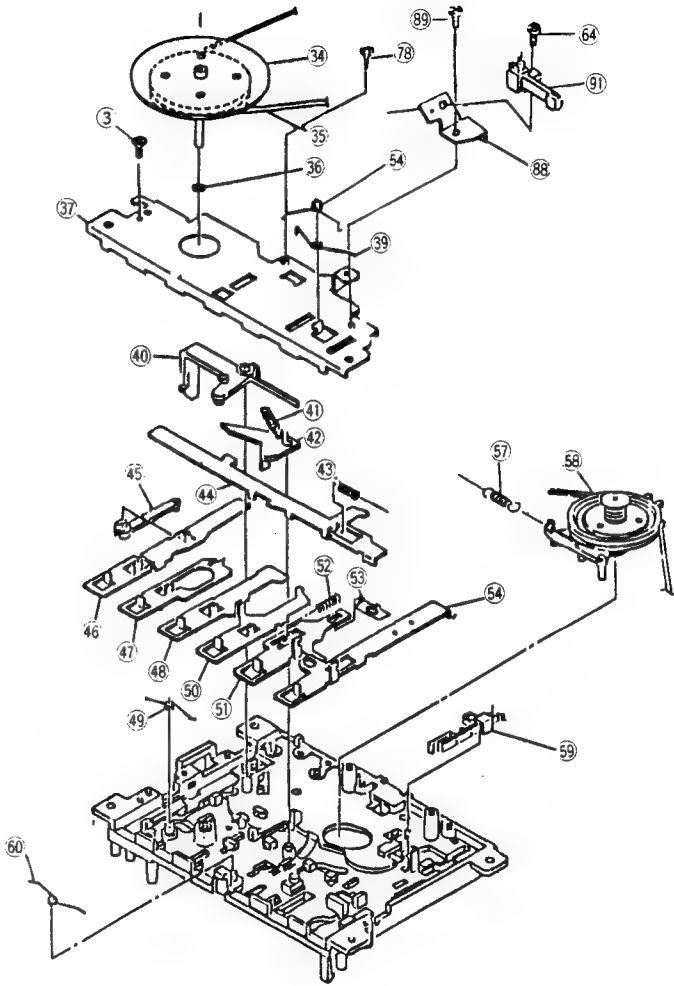
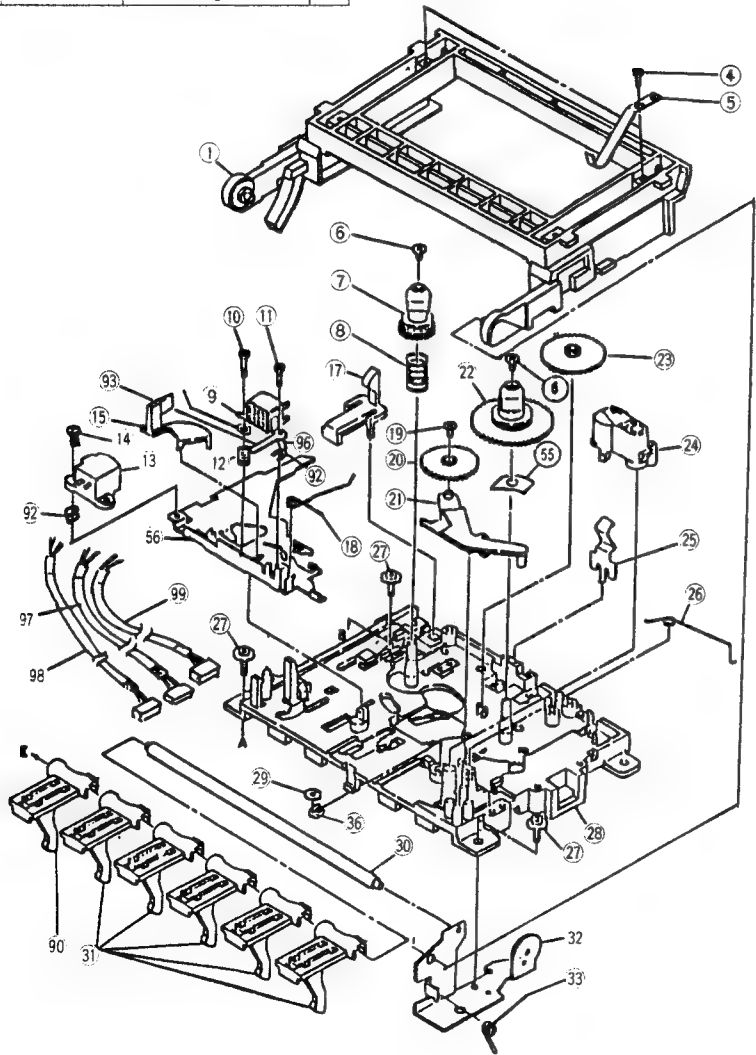


Part List & Exploded View of Deck Mechanism (I)

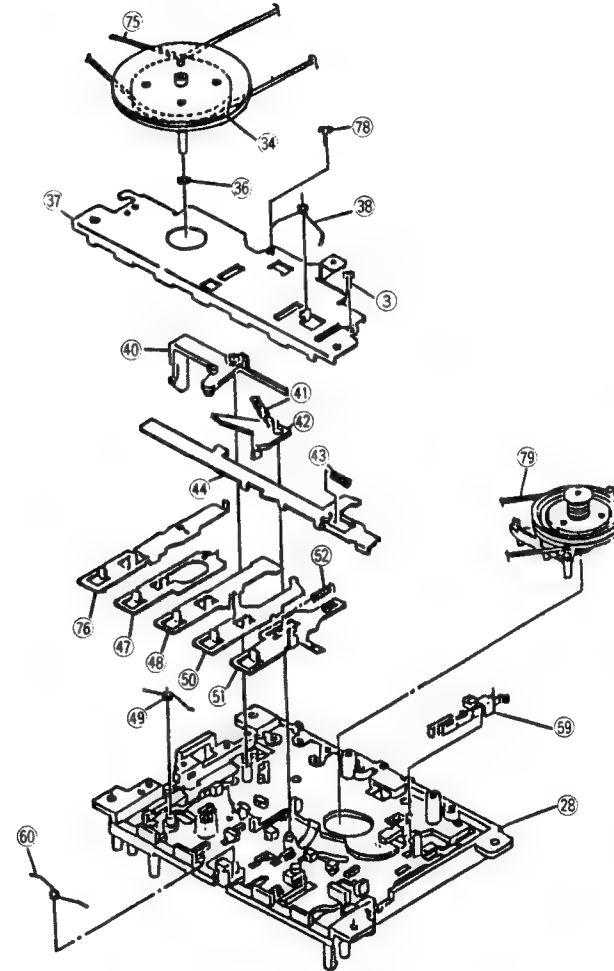
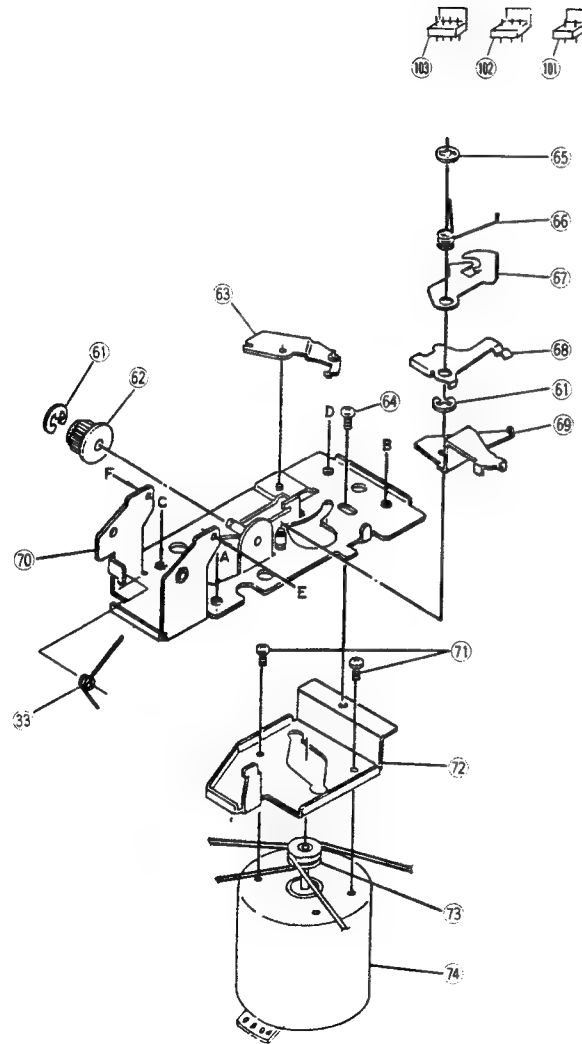
No.	Parts No.	Description		Q'ty	No.	Parts No.	Description		Q'ty
		Parts Code	Parts Name				Parts Code	Parts Name	
1	5708906500	PBC 1280K	Cassette Case	2	50	5708906780	PBE 17072	REW Lever	2
2			Not used!	-	51	5708902130	PBE 16686	Play Lever	2
3	5708906510	PGSL 30A2608K	L.Screw	2	52	5708906770	PBE 6865	H/D Base Spring	2
4	5708906520	PGST20A2005K	T.Screw	4	53	5708902150	PBE 17083	REC Stop Lever	1
5	5708901650	PBE 14715	Keep Plate	4	54	5708902160	PBE 16676	REC Lever	1
6	5708901660	PBE 17014	Bush B	4	55	5708906780	PBE 17137	T.Spring	2
7	5708901670	PBE 16646	S.Reel	2	56	5708906790	PBC 1257	Head Base B	1
8	5708901680	PBE 6602	C.Spring	2	57	5708906800	PBE 6689	Power Arm Spring	1
9	5708906530	MS15RBA2N1K	R/P Head	2	58	5708906810	PBD 0942	Power Arm	2
10	5708906540	PGSN10A2008K	N.Screw	2	58-1	5708906811	PBE 17170	Felt	2
11	5708906550	PGSP10A2003K	P.Screw	2	58-2	5708906812	PBE 17096	Pully	2
12	5708901720	PBE 6604	Azimuth C Spring	2	58-3	5708906813	PBE 17101	Felt Pully	2
13	5708906560	LE15AC1K	E.Head	1	58-4	5708906814	PBE 17098	Shaft	2
14	5708906570	PGSD20A2006K	D.Screw	1	58-5	5708906815	PBE 17094	Stopper	2
15	5708901750	PBE 16647	Tape Sensor	2	58-6	5708906816	PBE 6679(B)	Spring	2
16			Not used!	-	58-7	5708906817	PGWP75x110013	P.Washer	2
17	5708901770	PBE 16643	Interlock arm	1	58-8	5708906818	PBD 1887	Power Arm	2
18	5708901780	PBE 6911	Pinch Spring	2	58-9	5708906819	PBE 17095	Gear	2
19	5708901790	PBE 14927	Bush	2	59	5708902210	MSW 1342NCV	Main Switch	2
20	5708901800	PBE 16641	Idler Gear	2	60	5708902220	PBE 6607	Pause S/E Spring	2
21	5708901810	PBD 1874	Idler Arm	2	61	5708902230	PGRE30A	E.Spring	3
22	5708901820	PBE 03163	T. Reel Ass'y	2	62	5708902240	PBE 15524	Gear	3
22-1	5708906580	PBE 16627	T. Reel Stand	2	63	5708902250	PBE 03265	P Connect Plate Lever Ass'y	1
22-2	5708906590	PBE 17752	Felt	2	63-1	5708902251	PBE 17067	P Connect Lever	1
22-3	5708906600	PBE 17263	T. Reel	2	63-2	5708902252	PBE 17077	Shaft A	1
22-4	5708906610	PBE 6606	Spring	2	64	5708902260	PGSD10A2605	D.Screw	2
22-5	5708906620	PBE 17551	T. Reel Gear	2	65	5708902270	PGRS30P	CS Spring	1
23	5708901830	PBE 16640	F.Gear	2	66	5708902280	PBE 6688	Connect Spring	1
24	5708906630	PBE 03560	Pinch Arm Ass'y	2	67	5708902290	PBE 17066	Lock Plate	1
24-1	5708901841	PBD 10653	Pinch Arm	2	68	5708902300	PBE 17068	Unlock Plate	1
24-2	5708906640	PBE 17174	Pinch Roller	2	69	5708902310	PBD 10556	Connect Lever	1
24-3	5708901843	PBE 17256	Roller Shaft	2	70	5708906820	PBE 03646	Connect Plate A Ass'y	1
25	5708901850	PBE 17000	Cassette Spring	2	70-1	5708906821	PBD 10557K	Connect Plate A	1
26	5708901860	PBE 6610	Earth Spring	2	70-2	5708902340	PBE 17078	Shaft.B	1
27	5708906650	PGSD15A2606K	D.Screw	6	70-3	5708902350	PBE 17668	Damper Shaft	1
28	5708906660	PBD 01085	Chassis Ass'y	2	71	5708906830	PGSP11A2604K	P.Screw	2
28-1	5708906670	PBB 1146K	Base	2	72	5708906840	PBE 17073K	Motor Bracket	1
28-2	5708901900	PBE 17296	Capstern Metal	4	73	5708906850	PBE 17705	Motor Pully/W	1
29	5708901910	PGWN16X060040S	N.Washer	2	74	5708906860	EG30YD28K	Motor	1
30	5708906680	PBE 17107K	Button Shaft	2	75	5708906870	PBE 5277	Belt	1
31	5708901930	PBE 2966	Button Lever	10	76	5708902410	PBE 17070	Pause Lever/W	1
32	5708906690	PBE 17076K	Button Bracket.R	1	77			Not used !	-
33	5708901950	PBE 6680	Spring	2	78	5708902530	PBE 17112	Bush C	2
34	5708906700	PBE 03600	Fly Wheel Ass'y	2	79	5708902440	PBE 5239	Belt	1
34-1	5708906710	PBE 17099K	Fly Wheel Ring	4	80	5708902450	PBC 1236	Head Base	1
34-2	5708901963	PBE 17100	Capstern Shaft	2	81	5708902460	PBE 16624	Tape Guide	1
34-3	5708901961	PBD 10567	Fly Wheel W	2	82	5708906880	PBE 03635	Button Bracket L Ass'y	1
34-4	5708906720	PGSL16A2608K	L.Washer	4	82-1	5708906881	PBE 17075K	Button Bracket L	1
35	5708906730	PBE 5276	Belt	1	82-2	5708902472	PBE 17658	Damper Shaft	1
36	5708901980	PGWP21X040013	P.Washer	3	83	5708902480	PBE 17140	Spacer	1
37	5708901990	PBD 1872	Back Plate	2	84	5708902490	PBE 6847	Spring	1
38	5708902000	PBE 6687	Spring	1	85			Not used !	-
39	5708902010	PBE 6618	Spring	1	86			Not used !	-
40	5708902020	PBE 16644	Eject Lever	2	87	5708902520	PGWF22A050020	F.Washer	2
41	5708902030	PBE 6831	Auto Stop Spring	2	88	5708906890	PBE 17300	Switch Plate	1
42	5708902040	PBE 16619	S. Arm	2	89	5708906900	PGSD10A2004K	D.Screw	1
43	5708906740	PBE 6617	Function Spring	2	90	5708902540	PBE 2969	Button Lever.R	1
44	5708902060	PBD 1873	Function Lever	2	91	5708902210	LSA 1119P	Leaf Switch	1
45	5708902070	PBE 16625	Pause Arm	1	92	5708906910	PBE 17501	Spacer	3
46	5708902080	PBE 16681	Pause Lever	2	93	5708902620	PBE 3084	Lug Plate	2
47	5708902090	PBE 16680	S/E Lever	2	94			Not used !	-
48	5708902100	PBE 17071	FF Lever W	2	95			Not used !	-
49	5708906750	PBE 6614	FF/REW Lever W	2	96	5708906920	PBE 14710	Lug Plate	1

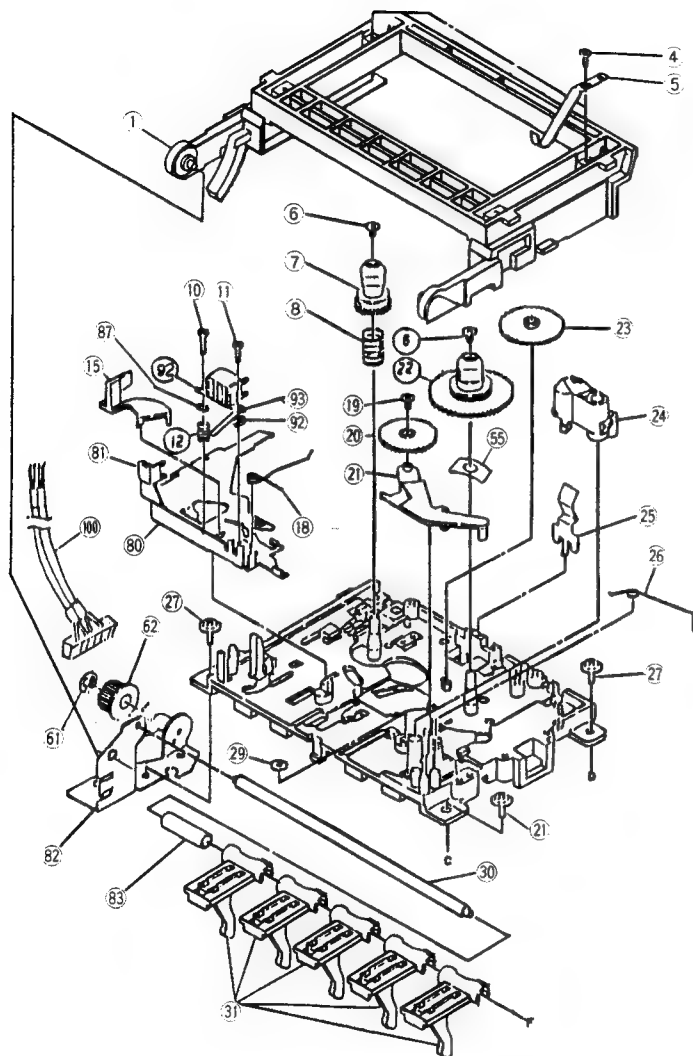
Exploded View of Deck Mechanism (II)

No.	Parts No.	Description		Q'ty
		Parts Code	Parts Name	
97	4358502260	-	Connector, Ass'y 2P	1
98	4358503260	-	Connector, Ass'y 3P	1
99	4358503261	-	Connector, Ass'y 3P	1
100	4358504401	-	Connector, Ass'y 4P	1
101	4428517510	-	Connector, Plug 2P	1
102	4428517610	-	Connector, Plug 3P	2
103	4428517710	-	Connector, Plug 4P	1



Exploded View of Deck Mechanism (III)





Electrical Parts List

PRODUCT SAFETY NOTICE: Products marked with Δ have special characteristics important to safety. If you replace any of these components, carefully read the product safety notice of this manual. Don't degraded the safety of the product through improper servicing. This manual is based on DD2010C, so use carefully note for remark. Resistors & Capacitors tolerance; D ($\pm 0.5\%$), J ($\pm 5\%$), K ($\pm 10\%$), M ($\pm 20\%$), Z ($+80\%$, -20%)

Ref. No	Part No.	Description	Remark
Main P.C. Board 4002318700			
Capacitors			
C101L/R	3579221130	Ceramic 220pF 50V Z	DD1010C
C102L/R	3579391130	Ceramic 390pF 50V Z	
C103L/R	3579101130	Ceramic 100pF 50V Z	
C104L/R	3679333120	Mylar 0.033 μ F 100V J	
C105L/R	3479210971	Electric SA 1 μ F 50V M	
C106L/R	3679203120	Mylar 0.02 μ F 100V J	
C107/C108	3479210121	Electric SA 100 μ F 10V M	
C201L/R	3579681130	Ceramic 680pF 50V Z	
C202L/R	3579101130	Ceramic 100pF 50V Z	
C203L/R	3679333120	Mylar 0.033 μ F 100V J	
C204L/R	3479210971	Electric SA 1 μ F 50V M	DD1010C
C205L/R	3679203120	Mylar 0.02 μ F 100V J	
C206/C207	3479210121	Electric SA 100 μ F 10V M	
C208L/R	3579391130	Ceramic 390pF 50V Z	
C301L/R	3479210971	Electric SA 1 μ F 50V M	
C302L/R	3479210971	Electric SA 1 μ F 50V M	
C303L/R	-	Not used !	
C303L/R	3479247971	Electric SA 4.7 μ F 50V M	
C304	3479210971	Electric SA 1 μ F 50V M	
C305L/R	3679102120	Mylar 0.001 μ F 100V J	DD1010C
C306L/R	3679102120	Mylar 0.001 μ F 100V J	
C307L/R	3679392120	Mylar 0.0039 μ F 100V J	
C308L/R	3679222120	Mylar 0.0022 μ F 100V J	
C308L/R	-	Not used !	
C309L/R	3679222120	Mylar 0.0022 μ F 100V J	
C309L/R	-	Not used !	
C310L/R	3679222120	Mylar 0.0022 μ F 100V J	
C310L/R	-	Not used !	
C311L/R	3579104534	Ceramic 0.1 μ F 50V Z	DD1010C
C312L/R	3579104534	Ceramic 0.1 μ F 50V Z	
C313L/R	3479210071	Electric SA 10 μ F 50V M	
C314/C315	3479210121	Electric SA 100 μ F 10V M	
C316L/R	3679152120	Mylar 0.0015 μ F 100V J	
C317L/R	-	Not used !	
C317L/R	3579471130	Ceramic 470pF 50V Z	
C318	3479210071	Electric SA 10 μ F 50V M	
C401L/R	3479210071	Electric SA 10 μ F 50V M	DD1010C
C402L/R	3479210971	Electric SA 1 μ F 50V M	
C403L/R	3679822120	Mylar 0.0082 μ F 100V J	
C404	3479210071	Electric SA 10 μ F 50V M	
C405L/R	3679822120	Mylar 0.0082 μ F 100V J	
C406L/R	3679473120	Mylar 0.047 μ F 100V J	
C407L/R	3479247971	Electric SA 4.7 μ F 50V M	
C408/C409	3479210121	Electric SA 100 μ F 10V M	
C410L/R	3479210971	Electric SA 1 μ F 50V M	
C411L/R	3679203120	Mylar 0.02 μ F 100V J	
C412L/R	3679203120	Mylar 0.02 μ F 100V J	DD1010C
C413L/R	-	Not used !	
C414L/R	-	Not used !	
C415L/R	3679183120	Mylar 0.018 μ F 100V J	
C416L/R	3679153120	Mylar 0.015 μ F 100V J	
C417L/R	-	Not used !	
C418L/R	-	Not used !	

Ref. No	Part No.	Description	Remark
C419L/R	3679153120	Mylar 0.015 μ F 100V	J
C420L/R	3679123120	Mylar 0.012 μ F 100V	J
C421L/R	3479210971	Electric SA 1 μ F 50V	M
C422L/R	3479210971	Electric SA 1 μ F 50V	M
C501	3609272130	Mylar 0.0027 μ F 180V	J
C502-C504	3679103120	Mylar 0.01 μ F 100V	J
C505	3679222120	Mylar 0.022 μ F 100V	J
C506	3479222971	Electric SA 2.2 μ F 50V	M
C507L/R	3579471130	Ceramic 470pF 50V	Z
C508	3479210971	Electric SA 1 μ F 50V	M
C701	3479210071	Electric SA 10 μ F 50V	M
C702/C704	3579104534	Ceramic 0.1 μ F 50V	Z
C703	3479233871	Electric SA 0.33 μ F 50V	M
C705/C706	3408247149	Electric SA 470 μ F 25V	M
C707	3408210249	Electric SA 1000 μ F 25V	M
C708/C709	3679473120	Mylar 0.047 μ F 100V	J
C710	3479222071	Electric SA 22 μ F 50V	M
C711	3579104534	Ceramic 0.1 μ F 50V	Z
C712/C713	3479210121	Electric SA 100 μ F 10V	M
C714	3479247061	Electric SA 47 μ F 35V	M
C801L/R	3479247971	Electric SA 4.7 μ F 50V	M
C802L/R	3479210071	Electric SA 10 μ F 50V	M
C803L/R	3679103120	Mylar 0.01 μ F 100V	J
Coils			
L301L/R	2658301120	MPX Filter	
L402L/R	2648601080	Inductor 3.5mH	
L501	2638601150	Bias OSC	
L502L/R	2658601080	REC Trap	
Connectors			
CNT101	4428517710	Plug 4P	Domestic
CNT1011	4358504401	Ass'y 4P, From Deck Mecha Head	
CNT201L/R	4428517610	Plug 3P	
CNT201L/R1	4358503280	Ass'y 3P, From Deck Mecha Head	
CNT501	4428517510	Plug 2P	
CNT5011	4358502280	Ass'y 3P, From Deck Mecha Head	
CNT601	4428525250	Wire Trap 4P	
CNT701	4428525240	Wire Trap 3P	
CNT702	4428525270	Wire Trap 8P	
CNT704	4428517910	Plug 6P	
CNT7041	4358506220	Ass'y 6P, From Deck Mecha	Domestic
CNT703	4428518310	Plug 10P	
CNT7031	4358510263	Ass'y 10P, From Deck Mecha	
CNT705	4428506910	Plug 5P	
CNT901	4428525290	Wire Trap 8P	
CNT902	4428525270	Wire Trap 6P	
CNT903	4428525280	Wire Trap 7P	
Diodes			
D301	2058306101	1N4148	

Ref. No	Part No.	Description	Remark
D401	2058306101	1N4148	
D501	2058306101	1N4148	
D502	2258106100	1N4002	
D701-D708△	2258106100	1N4002	
D709	2258599105	Zener 6.2V	
D710	2058306101	1N4148	
D711	2258106100	1N4002	
D712	2258599104	Zener 5.6V	
D713-D716	2058306101	1N4148	
D717	2258106100	1N4002	
D718-D721	2058306101	1N4148	
IC's			
IC101/IC201	2168206106	KIA6258S OP amp	DD1010C
IC301	2168011134	HA12170NT Dolby BC	
IC301	2168011133	HA12136 Dolby B	
IC401/IC801	2168206106	KIA6555S OP amp	
IC701	2168602101	MC7908 Regulator	
IC702	2168602102	MC7908 Regulator	
IC703	2138001103	GD4027B Switching	
Relay			
RELAY501	5528001020	RY-12W-K	
Resistors: All resistors are 1/5W carbon film: ± 5% tolerance, unless otherwise specified.			
R101/L/R	3069274970	270kΩ	
R102/L/R	3069220970	22Ω	
R103/L/R	3069823970	82kΩ	
R104/L/R	3069472970	4.7kΩ	
R105/L/R	3069332970	3.3kΩ	
R106/L/R	3069392970	3.9kΩ	
R107/L/R	3069333970	33kΩ	
R108/L/R	3069103970	10kΩ	
R201/L/R	3069100970	10Ω	
R202/L/R	3069274970	270kΩ	
R203/L/R	3069220970	22Ω	Domestic
R204/L/R	3069823970	82kΩ	
R205/L/R	3069472970	4.7kΩ	
R206/L/R	3069332970	3.3kΩ	
R207/L/R	3069392970	3.9kΩ	
R208/L/R	3069222970	2.2kΩ	
R209/L/R	3069333970	33kΩ	
R301/L/R	3069823970	88kΩ	
R302/L/R	3069103970	10kΩ	
R303/L/R		Not used !	
R303/L/R	3069224970	220kΩ	DD1010C
R304/L/R		Not used !	
R304/L/R	3069394970	390kΩ	DD1010C
R305/L/R		Not used !	
R305/L/R	3069472970	4.7kΩ	DD1010C
R306/L/R	3069242970	2.4kΩ	
R307/L/R	3069682970	6.8kΩ	
R308/L/R	3069223970	22kΩ	
R309/L/R	3069561970	560Ω	
R310/L/R	3069223970	22kΩ	
R310/L/R	3069333970	33kΩ	
			DD1010C

Ref. No	Part No.	Description	Remark
R310/L/R	3069243970	24k Ω for DD2010C only	Domestic
R311/L/R	3069222970	2.2k Ω	DD1010C
R311/L/R	3069122970	1.2k Ω	
R312/L/R	3069512970	5.1k Ω	
R312/L/R	3069153970	15k Ω	
R313/L/R	3069472970	4.7k Ω	
R314	3069183970	18k Ω	
R315/L/R		Not used !	
R315/L/R	3069472970	4.7k Ω	
R401/L/R	3069332970	3.3k Ω	DD1010C
R402/L/R	3069152970	1.5k Ω	
R403/L/R	3069222970	2.2k Ω	
R404/L/R	3069332970	3.3k Ω	
R405/L/R	3069622970	6.2k Ω	
R406/L/R	3069102970	1k Ω	
R407/L/R	3069563970	56k Ω	
R408/L/R	3069472970	4.7k Ω	
R409/L/R	3069103970	10k Ω	
R410/L/R	3069562970	5.6k Ω	
R411/L/R	3069101970	100k Ω	DD1010C
R412/L/R	3069620970	62k Ω	
R413/L/R	3069103970	10k Ω	
R414/L/R		Not used !	
R415/L/R		Not used !	
R416/L/R	3069752970	7.5k Ω	
R417/L/R	3069121970	12k Ω	
R418/L/R	3069181970	18k Ω	
R419/L/R	3069752970	7.5k Ω	
R420/L/R		Not used !	
R421/L/R		Not used !	
R422/L/R	3069123970	12k Ω	
R423/L/R	3069620970	62k Ω	
R424/L/R	3069101970	100k Ω	
R501	3069100970	10k Ω	
R502/R503	3069333970	33k Ω	
R504/R505	3069103970	10k Ω	
R506	3069622970	6.2k Ω	
R507	3069472970	4.7k Ω	
R508	3069123970	12k Ω	
R509/R510	3069103970	10k Ω	
R511	3069333970	33k Ω	
R701	3069152970	1.5k Ω	
R702	3069124970	12k Ω	
R703	3069332970	3.3k Ω	
R704	3069103970	10k Ω	
R705	3069152970	1.5k Ω	
R706	3069223970	22k Ω	
R707	3069471970	47k Ω	
R708	3069392970	3.9k Ω	
R709	3069202970	2k Ω	
R710	3069152970	1.5k Ω	DD1010C
R711	3069472970	4.7k Ω	
R712/R713	3069103970	10k Ω	
R714	3069223970	22k Ω	
R715	3069562970	5.6k Ω	
R717	3069102970	1k Ω	
R801/L/R	3069202970	2k Ω	DD1010C
R802/L/R	3069382970	3.8k Ω	
R803/L/R	3069473970	47k Ω	

Ref. No	Part No.	Description	Remark	
R804/L/R R805/L/R R806/L/R	3069100970 3069103970 3069472970	10k 10k 4.7k		
Variable Resistors				
VR101/L/R VR201/L/R VR401/L/R VR501/VR502 VR503L/R VR701	3248020343 3248020343 3248020343 3248060343 3248010443 3248020243	Semi 20k, B Semi 20k, B Semi 20k, B Semi 50k, B Semi 100k, B Semi 2k, B		
Transistors				
Q101/L/R Q102/L/R	2208622108 2208622108	DTCT14TS NPN DTCT14TS NPN	DD1010C	
Q201/L/R Q202/L/R	2208622108 2208606112	DTCT14TS NPN KTD1302S NPN		
Q301/L/R Q301/L/R Q302/L/R Q303/L/R Q304/L/R	 2208606104 2208622108 2208622108 2208606112	Not used ! KTC1815Y NPN DTCT14TS NPN DTCT14TS NPN KTD1302S NPN		
Q401/L/R Q402/L/R Q415/L/R	2208606112 2208622108 	KTD1302S NPN DTCT14TS NPN 		
Q501/Q502 Q503/Q504 Q505-Q507 Q508/Q705 Q509 Q510	2208606114 2208622106 2208622108 2028406124 2208622106 2208622106	KMPS A06 NPN DTCT14YS NPN DTCT14TS NPN 2S1366Y PNP DTCT14YS NPN DTA114YS PNP		
Q701 Q702 Q703/Q704 Q705 Q706 Q707/Q708	2208622108 2208622105 2208622106 2208606104 2208622106	DTCT14TS NPN DTA114YS PNP DTCT14YS NPN KTC1815Y NPN DTCT14YS NPN		
Other				
GND1	4235006810	Terminal GND		

Front Board 4002318710

Capacitors				
C901/L/R	3479247971	Electric SA	4.7 μ F	50V M
C902/L/R	3479210071	Electric SA	10 μ F	50V M
C903	3479210071	Electric SA	10 μ F	50V M
C904	3579104534	Ceramic	0.1 μ F	50V Z
Connectors				
SLT301	4428525420	Plug 8P, Hold		
(SLT301)	(4119208306)	Slot Wire 8P 300mm		

Ref. No	Part No.	Description	Remark
SLT302	4428525400	Plug 6P, Hold	
(SLT302)	(4119208226)	Slot Wire 6P 220mm	
SLT303	4428525410	Plug 7P, Hold	
(SLT303)	(4119207286)	Slot Wire 7P 280mm	
Diode			
D911	2058306101	1N4148	
LED's			
D901/L/R	2371124501	SLR-34-YCD, Yellow	DD1010C
D904/L/R			
D905/L/R	2371124501	SLR-34-URC, Red	
D906/L/R	2371124501	SLR-34-URC, Red	
D907	2371124501	SLR-34-URC, Red	
D908-D909	2371124501	SLR-34-YCD, Yellow	
D910	2371124501	SLR-34-YCD, Yellow	
(D910)		Not used !	
IC's			
IC901/L/R	2168022114	BA6124 LED Level meter	
Resistors			
R901/L/R	3069243970	24k Ω	Domestic
R902/L/R	3069103970	10k Ω	
R903/L/R	3069103970	10k Ω	
R904/L/R	3069152970	1.5k Ω	
R905/L/R	3069152970	1.5k Ω	
R906/L/R	3069822970	8.2k Ω	
R907	3069152970	1.5k Ω	
R908	3069223970	22k Ω	
R909	3069273970	27k Ω	
R910	3069881970	88k Ω	
R911	3069102970	1k Ω	
R912	3069103970	10k Ω	

Power Board 4002318720

Others			
F1001		Not used !	Domestic
F1001	5508201330	Fuse, NB 300mA/250V	
F1002	5508302036	Fuse, T 1A/250V	
F1002	5508200930	Fuse, NB 150mA/250V	Domestic
CNT1001	4428525790	Plug AC 3P	

Mic. Board 4002318730 (Domestic only)

Capacitors				
C801	3479210971	Electric SA	1 μ F	50V M
C802	3579101130	Ceramic	100pF	50V Z
C803	3579221130	Ceramic	220pF	50V Z
C804-C806	3479210971	Electric SA	1 μ F	50V M
C807/C808	3479222071	Electric SA	22 μ F	50V M

Ref. No	Part No.	Description	Remark
Connectors			
SLT601 (SLT601)	4428525380 4119204246	Plug 4P, Hold Slat Wire 4P 240mm	
IC			
IC601	2168206106	KIA6259S OP amp	
Resistors			
R601	3069561970	560Ω	DD1010C
R602	3069392970	3.9kΩ	
R603	3069683970	68kΩ	
R604	3069152970	1.5kΩ	
R605	3069472970	4.7kΩ	
R606	-	Not used !	
R607	-	Not used !	
R607	3069182970	1.8kΩ	

H/P Board 4002318740			
SLT701 (SLT701)	4428525370 4119203306	Plug 3P, Hold Slat Wire 3P 300mm	
SLT702	4428525400	Plug 6P, Hold	
SLT702	4119206286	Slat Wire 6P 280mm	
Others			
TRANS1 (TRANS1)	2828076907 2828076000	Transformer Power 230V 50Hz Transformer Power 100V/220V 60Hz	Domestic

Mechanical Parts List (Cabinet & Chassis)

No.	Description	Part No.	Q'ty	Remark
1	Panel Front, Black	048501018311	1	
1	Panel Front, Black	048501018312	1	DD1010C
2	Badge	048535032511	1	Domestic
(2)	Badge, Shenwood	048535031911	1	
3	Spring	6555004380	1	
4	Button Power	8545074310	1	
5	Door Deck, A	048563004311	1	
6	Door Deck, B	048563004411	1	
7	Door Window, A	048555032011	1	
7-1	Door Window, B	048555032012	1	
8	Button Cap, C	8545074610	1	
9	Button Cap, B	048545074511	1	
10	LED Window	048555031111	1	
10	LED Window	048555031111	1	DD1010C
11	Inlay	048535030811	1	
11	Inlay	048535030812	1	DD1010C
12	Diffuser	8535000710	1	
13	Knob Rotary	048543000011	1	
(13)	Knob Rotary, B	048545074811	1	Domestic
14	Button CAP, A	048543027611	1	
15	Button CAP, D	048543027711	1	Domestic
16	Button Push	8545074710	4	
17	Tape Counter	5318002910	1	
18	Bracket Counter	6505005030	1	
19	Belt	7165000610	1	
20	Button Deck, REC	048543027812	1	
21	Button Deck, Play	048543027811	2	
(21)	Button Deck, Stop/EJ	048543027813	2	
(21)	Button Deck, Pause	048543027814	2	
(21)	Button Deck, REV	048543027815	2	
(21)	Button Deck, F/F	048543027816	2	
22	Leaf Switch	4548600610	3	
23	Cover Mecha	048685003721	2	
24	Deck Mecha	5708009510	1	
25	P.C. Board Power	4002318720	1	
26	Jack Phone, Gold	4438009510	1	
27	Switch Power	4628005210	1	
28	Shield Phone	6165136410	1	
29	Cover Top, Black	046122020311	1	
30	P.C. Board	4002318720	1	
31	AC Socket, Black	4448003010	1	Except A
32	AC Outlet, Black	4448003110	1	A
(32)	AC Outlet, Black	4448100410	1	Domestic
(32)	AC Outlet, Black	4448103610	1	C,D,F
33	Side Frame, Left	612630610	1	
34	Foot, AL Ring	046033101711	4	Domestic
(34)	Foot, Gold	046033101611	2(4)	A(B,C,D,E,F)
35	Transformer Power	2828076907	1	A
36	P.C. Board Main	4002318700	1	
37	Heatsink Regulator TR	7505206120	1	
38	Heatsink Regulator TR	7505206110	2	
39	Remote Jack, 2P	4438105010	1	
40	Chassis Back, Black	046102028611	1	Domestic
(40)	Chassis Back, Black	046102028621	1	A
(40)	Chassis Back, Black	046102028631	1	B
(40)	Chassis Back, Black	046102028641	1	C
(40)	Chassis Back, Black	046102028651	1	D
(40)	Chassis Back, Black	046102028661	1	E

No.	Description	Part No.	Q'ty	Remark
(40)	Chassis Back, Black	046102028671	1	F
41	AC Power Cord, Black	4308001810	1	Domestic
(41)	AC Power Cord, Black	4308000570	1	A,B
(41)	AC Power Cord, Black	4308000210	1	C,D,F
(41)	AC Power Cord, Black	4308000610	1	E
42	Jack RCA 4P	4438103110	1	
43	Side Frame, Right	6123620120	1	
44	Cover Bottom	6122418010	1	
45	Foot, Rear	8033101610	2	A
46	VR P.C. Board	4002318710	1	
47	Switch Push, 2 Key	4628057610	2	
47	Switch Push, 2 Key	4628057710	1	DD1010C
48	VR 50KA×2	3208050510	1	
49	LED Holder	6043008210	1	
-	Cord RCA, 2P for Line In/Out	4328200510	2	
-	Cord RCA, 1P for Remote	4328204510	1	
Screws				
S1	#2 PTC 3×8 ZNB	8119230083		
S2	WSAM 4×8 ZNB	8159440083		
S3	#2 BTC 3×8 ZNY	8109230061		
S4	WSAM 4×8	8159440081		
S5	#2 BTC 3×8 ZNB	8109230083		
S6	#2 BTC 3×8 ZNY	8109230061		
S7	#2 WPTC 3×8 ZNY	8159230061		
S8	#1 PTC 2.6×6 ZNB	8119126063		

A

B

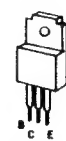
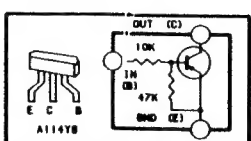
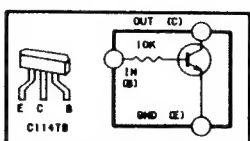
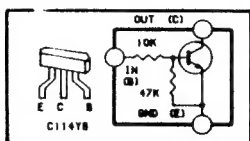
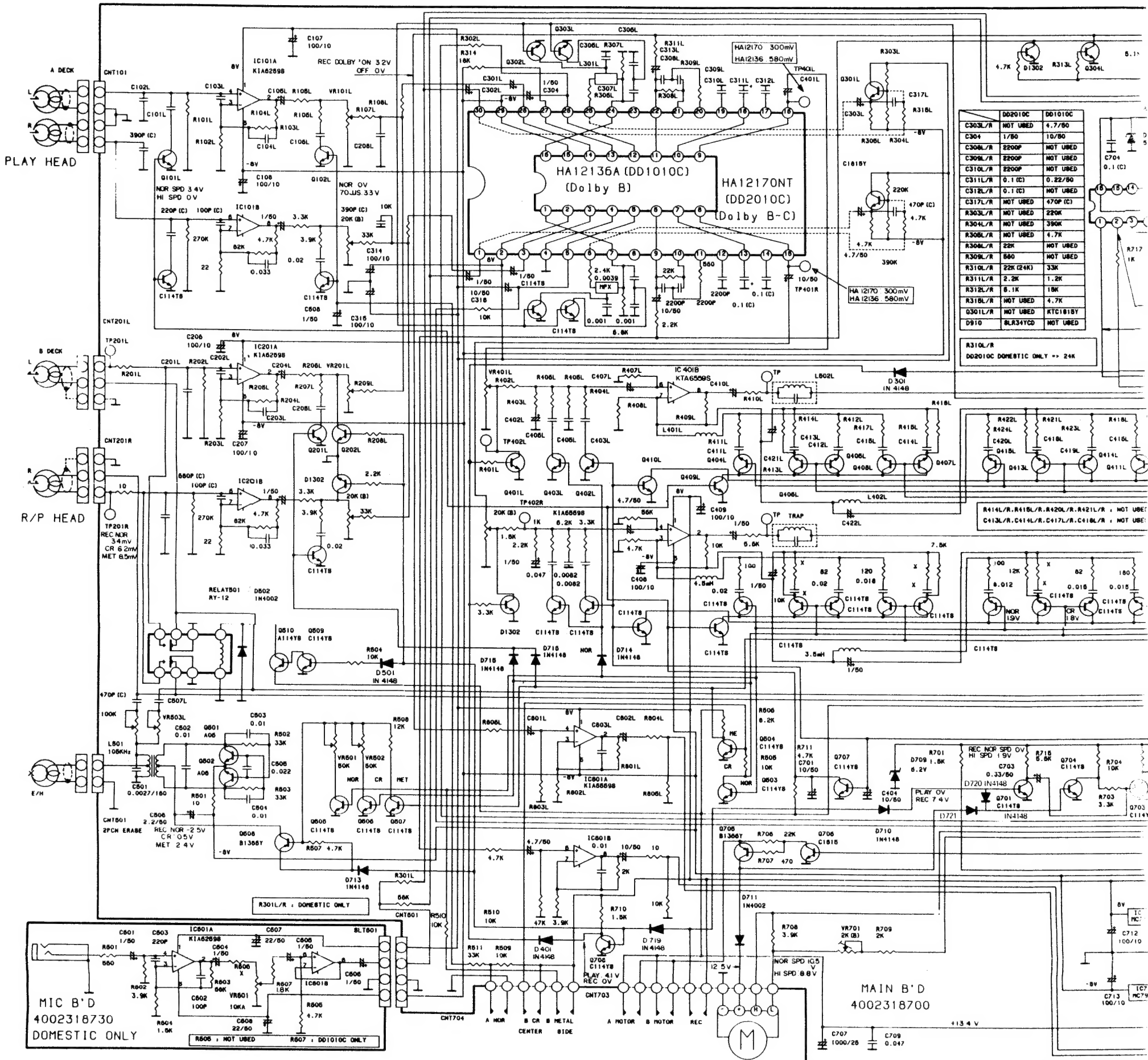
C

D

Schematic Diagram DD-1010C/2010C

DD-1010C IC 301 HA12136					
PIN	REC	PLAY	PIN	NR ON	NR OFF
12	OV	-7.5V	5	7.5V	-8V
PIN 10: -8.3V PIN 2: 6V PIN 15: -8V					
OTHER PIN: OV					

DD2010C IC 301 HA12170NT						
PIN	REC	PLAY	PIN	OFF	B	C
2G	OV	-7.2V	13, 18	-3.2V	-4.4V	-5.0V
PIN 2: +8V, PIN 29: -8V						
OTHER PIN: OV			5	-7.2V	OV	-5.7V



D

E

F

G

Schematic Diagram

DD-1010C/2010C

